

Coastal Observation Technology System Project Summary: 2005-2007

Project Name/Title: The Alliance for Coastal Technologies (ACT)

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Brief Project Summary (*not to exceed 1/3 page*):

The Alliance for Coastal Technologies (ACT) was established in the belief that U.S. efforts to create IOOS would require partnerships of government, academia, and industry for research and development on new advanced coastal ocean technologies and for mechanisms to facilitate the continuous infusion of these new capabilities into IOOS operations. The ACT vision is to become a national resource for ensuring that the latest, innovative, and most effective technologies are continuously integrated into the national IOOS at all levels. To make this vision a reality, ACT works to provide technology users with the choices and certainty they require for making knowledgeable decisions, enhance communications between technology stakeholders, and build and strengthen the enabling environment and thus the capacity for technology innovation and adoption. ACT objectives are to serve as: (1) an unbiased, third-party testbed for evaluating new and developing coastal sensor and sensor platform technologies, (2) a comprehensive information clearinghouse on coastal technologies, and (3) a forum for capacity building through a series of workshops and training on specific technology topics. Through these activities, ACT aids “operational” resource managers, coastal scientists, and private sector companies by providing critical information on the latest, best, innovative, and most efficient technologies for coastal observations. In addition, ACT enables the operational IOOS agencies to implement user-oriented decision-making processes for funding and managing technology development and for linking technology development activities in research institutions and the private sector with IOOS operations.

Accomplishments to Date (*max of 10, bullet format*):

- Completed verification reports on four *in situ* dissolved oxygen (DO) sensors. Participating technology companies and their verified instruments were: 1) YSI Environmental Rapid

Pulse DO sensor; 2) Greenspan Analytical DO sensor models DO300/DO1200; Aanderaa Instruments, Inc., Oxygen Optode 3830/3930/3835; and In-Situ Inc., RDO sensor.

- Completed laboratory and field (moored and profiling) verification tests on 8 *in situ* chlorophyll fluorometers from 6 companies. Verification reports will be completed in January 2006 for: Chelsea Instrument Group, AQUA^{tracka} MK III and MINI^{tracka} II C; WetLabs, ECO FLNTSUB; Turner Designs, CYCLOPS 7 submersible fluorometer and SCUFA (Self-Contained Underwater Fluorescence Apparatus) Fluorometer; YSI, 6 Series Sonde with chlorophyll sensor; Hach/Hydrolab DataSonde 4 with chlorophyll sensor; and bbe Moldaenke, FluoroProbe 2 (profiling field tests only).
- Initiated verification of *in situ* turbidity sensors. Ten companies submitted preliminary applications: Aquatec Group; Chelsea Instruments Group; D&A Instrument Co.; Greenspan; Hach/Hydrolab; In-Situ, Inc.; McVan Instruments; RBR Ltd; WET Labs; and YSI.
- In 4 years, completed 21 Sensor Technology Workshops on a variety of sensor types and classes with over 600 participants from the technology R&D and operational resource management communities and the private sector.
- The University of Alaska Fairbanks and Alaska Sea Life Center (UAF/ASLC) began participating in ACT planning in preparation for becoming an ACT Partner in 2006.
- Through Partners and Stakeholder Council members, participated in the planning activities of 10 of the 11 IOOS Regional Associations (RAs).
- Expanded outreach activities, including the ACT web site and regional Alliance Member Chapter functions. The ACT web site receives an average of 8000 to 9000 unique hits each month. There were over 40,000 downloads of ACT workshop and technology evaluations reports, newsletters and other documents.
- Expanded the Coastal Observing Technology Clearinghouse, a database that compiles information on coastal observing technology and company information worldwide, and allows technology users to match needs with technology providers in a virtual “marketplace.” It now contains records of over 2,000 sensors and corresponding links to over 400 marine technology companies and receives about 1,500 unique hits per month.

Current Year Objectives:

- Complete the verification of *in situ* turbidity sensors and initiate a demonstration evaluation of *in situ* nutrient sensors.
- Continue Sensor Technology Workshops (8) covering a variety of chemical and biological oceanographic sensors and meteorological instruments, platforms, and telemetry systems; and continue pilot training activities, based on initial workshops.
- Sustain stakeholder dialogues through the Stakeholder Council, Alliance Members, and technical workshops.
- Continue to work with the IOOS RAs and to network and collaborate with other institutions and organizations engaged in ocean observing technology R&D, application, and transfer, including collaboration with international institutions in the development of a Euro-ACT and PacRim-ACT.
- Sustain and enhance ongoing activities to disseminate information through web-based media, including the web site and the Coastal Observing Technology Clearinghouse.

Partners: University of South Florida; Skidaway Institute of Oceanography; Moss Landing Marine Laboratory & Monterey Bay Aquarium Research Institute; Gulf of Maine Ocean Observing System; the School of Ocean and Earth Science and Technology (SOEST), University of Hawaii; the Cooperative Institute for Limnology and Ecosystems Research (CILER), University of Michigan, and the Alaska Sea Life Center and University of Alaska Fairbanks.